

## REMARKS

### **I. Status of the Claims**

Claims 1-48 are pending in the application. Claims 1 and 36 stand rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter. Claims 36-48 stand rejected under 35 U.S.C. § 112, second paragraph as indefinite. Claims 1-48 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,933,831 to Jorgenson (Jorgenson).

Applicants have amended Claims 1 and 36 to recite that the recitations of the claims are computer implemented methods. Applicants submit that such amendments do not raise new issues and remove rejections, thereby placing the application in better form for appeal, if such is necessary. Accordingly, Applicants request entry of the present Amendment After Final.

Applicants submit that these rejections are improper for at least the reasons discussed in Applicants' previous response. In the interest of brevity, those arguments will not be repeated but are incorporated herein. Accordingly, Applicants will focus the present Request for Reconsideration on the Response to Arguments portion of the Final Action.

### **II. The Non-Statutory Subject Matter Rejections**

The Final Action rejects Claims 1 and 36 under 35 U.S.C. § 101 as directed to non-statutory subject matter. The basis of the Final Action's rejection is that "there is no positive recitation of the claimed body as a whole to breath life and meaning into the preamble." The Final Action asserts that "the claimed invention, as a whole, is not within the technological arts" because "the claims are taken to merely recite a field of use that can be implemented by the mind of a person or by the use of a pencil and paper."

Applicants have amended Claims 1 and 36 to recite that the operations are carried out by one or more data processing systems. Furthermore, Applicants direct the Examiner's attention to the recitation in Claims 1 of :

1. (Currently Amended) A computer-implemented method of managing a relational database, comprising:

selectively associating a foreign key associated with a record in a relating table with a specific one of a plurality of related tables based on at

least one attribute of the record in the relating table by selectively creating a corresponding association in the relational database so as to provide multiple but exclusive relationships between tables in the relation database.

(Emphasis added.) Claim 1 recites that these operations are a computer-implemented method of managing a relational database and also recites that these associations are created in the relational database. Therefore, Applicants submit that the non-statutory subject matter rejection of Claim 1 should be withdrawn.

The non-statutory subject matter rejection of Claim 36 fails for the same reason. Claim 36 recites

A computer-implemented method of enforcing a multiple but exclusive relationship between a first table and a plurality of second tables in a database, comprising the following carried out by one or more data processing systems:

associating, in the database, a type with respective ones of the plurality of second tables;

associating, in the database, a type with records in the first table such that the type of a record in the first table identifies which of the respective ones of the plurality of second tables the record is associated with; and

enforcing, in the database, the multiple but exclusive relationship between records in the second tables and the first table based on the type associated with a record in the first table.

(Emphasis added.) Claim 36 recites that these operations are a computer implemented method of enforcing a multiple but exclusive relationship in a database and also recites that these associations are created in a database. Therefore, Applicants submit that the non-statutory subject matter rejection of Claim 36 should be withdrawn.

Furthermore, Applicants direct the Examiner's attention to the requirement of the MPEP § 2106 that "[f]or [computer-related process] subject matter to be statutory, the claimed process must be limited to a practical application of the abstract idea or mathematical algorithm in the technological arts.... A claim is limited to a practical application when the method, as claimed, produces a concrete, tangible and useful result." The present application at page 3-4 describes some of the reasons why it may be desirable to create multiple but exclusive relationships in a database. Insofar as the

creation and enforcement of multiple but exclusive relationships in a database by one or more data processing systems as recited in Claims 1 and 36, respectively, is a concrete, tangible and useful result, Applicants submit that the non-statutory subject matter rejections have been overcome.

### **III. The Indefiniteness Rejections**

The Final Action rejects Claims 36-48 under the second paragraph of 35 U.S.C. § 112 as indefinite. Applicants appreciate the withdrawal of the enablement rejection under the first paragraph of § 112. Thus, the only remaining objections under § 112 relate to indefiniteness. Applicants also appreciate that the Examiner, in the Response to Arguments section, pointed out the incomplete sentence at page 19, line 2 of the previous response.

Applicants apologize for any confusion resulting from the incomplete sentence and withdraw the partial sentence. However, Applicants note that this sentence came in a discussion of the previous Office Action's enablement rejection which has been withdrawn.

As to the indefiniteness rejection, Applicants point out that the MPEP § 2106 directs that § 112, second paragraph requires that "the claims [be] set out and circumscribe the invention with a reasonable degree of precision and particularity. In this regard, the definiteness of the language must be analyzed, not in a vacuum, but always in light of the teachings of the disclosure as it would be interpreted by one of ordinary skill in the art."

Applicants maintain that the disclosure of the present application sets out the invention with more than sufficient precision and particularity to meet this requirement. The Final Action at page 4 states that "it is not understood what is ... meant by 'associating a type with respective ones of the plurality of second tables.'" The present application discloses that the type associated with any particular second table is arbitrary within a database schema other than that it identify a particular one of the second tables. Because Applicants do not limit the inventions of Claims 36, 40 and 45 to any particular mechanism for identifying the second tables as long as the type of table is associated with a particular one of the second tables, those claims are not indefinite for failing to specify what particular mechanism is used. Insofar as

Claims 36, 40 and 45 set out the invention with precision and particularity, Applicants respectfully submit that the indefiniteness rejections should be withdrawn.

#### **IV. The Rejections Based on Jorgenson**

The Final Action rejects Claims 1-48 under 35 U.S.C. § 102(b) as anticipated by Jorgenson. The Examiner failed to respond to the remarks provided in the previous response. Applicants therefore respectfully refer the Examiner to all the remarks made with regard to Jorgenson at page 21-23 of the previous response.

For example, in the previous response, Applicants noted that the Official Action cited to Figures 3A-3C of Jorgenson as disclosing "means for selectively associating a foreign key value of a record in the relating table with a specific one of the plurality of related tables based on at least one attribute of the record containing the foreign key in the relating table." Official Action, p. 8. This citation has not changed in the Final Action. Final Action, p. 6. Applicants also note that the cited figures of Jorgenson describe operations for displaying a hyperlinked entity relationship diagram. Jorgenson, col. 2, lines 52-55. Applicants further noted that the operations of Figures 3A-3C do not provide the entity relationship in a database but merely provide a display of that relationship. Nothing in the cited portions of Jorgenson discloses or suggests the selective association of a foreign key in a relating table with a specific one of a plurality of related tables based on an attribute of the record containing the foreign key in the relating table as is recited in independent Claim 12. Similar recitations to those of Claim 12 are found in Claims 1 and 24. The Final Action makes no attempt at explaining how displaying a hyperlinked entity relationship diagram discloses or suggests the recitations of the claims. Accordingly, these claims are also not anticipated by Jorgenson for analogous reasons.

Furthermore, Applicants noted that while the Official Action mentioned Claim 40, the Official Action never explains how the recitations of Claim 40 are disclosed by Jorgenson. Such a deficiency has not been corrected in the Final Action.

In particular, Claim 40 recites:

40. (Original) A system for enforcing a multiple but exclusive relationship between a first table and a plurality of second tables, comprising:  
means for associating a type with respective ones of the plurality of second tables;

means for associating a type with records in the first table such that the type of a record in the first table identifies which of the respective ones of the plurality of second tables the record is associated with; and

means for enforcing the multiple but exclusive relationship between records in the second tables and the first table based on the type associated with a record in the first table.

Applicants submit that a system for viewing entity relationship diagrams as described in Jorgensen does not disclose or suggest enforcing multiple but exclusive relationships between records as recited in Claim 40. Accordingly, Applicants submit that Claim 40 and the claims that depend from Claim 40 are neither disclosed nor suggested by Jorgensen. Similar recitations are found in Claims 36 and 45 and, therefore, these claims and the claims that depend from them are patentable over Jorgensen for analogous reasons.

With regard to the dependent claims, these claims are patentable as depending from a patentable base claim. Applicants also submitted in the previous response that certain of these claims are separately patentable over the cited references. These arguments have also not been addressed or refuted. In fact, the Final Action continues to reject the dependent claims saying that they are "default properties of standard OO SQL processing." Final Action, p. 6. As discussed in Applicants' previous response, Applicants are not claiming new properties of SQL but are claiming the use of database techniques to provide new functionality. Based on the logic of the argument in the Final Action, no software implemented invention is patentable if the programming language it is written in is known. Applicants submit that merely because the building blocks that are used to create embodiments of the present invention are known, that does not disclose or suggest the specific arrangement of those building blocks as is recited in the claims.

For at least the reasons discussed therein, Applicants submit that the rejections of Claims 1-48 based on Jorgenson are improper.

## **V. Conclusion**

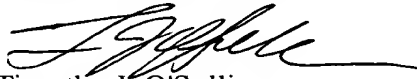
In light of the above discussion, Applicant submits that the present application is in condition for allowance, which action is respectfully requested. If, in the opinion

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of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

It is not believed that an extension of time and/or additional fee(s)-including fees for net addition of claims-are required, beyond those that may otherwise be provided for in documents accompanying this paper. In the event, however, that an extension of time is necessary to allow consideration of this paper, such an extension is hereby petitioned for under 37 C.F.R. §1.136(a). Any additional fees believed to be due in connection with this paper may be charged to Deposit Account No. 09-0461.

Respectfully submitted,



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**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on June 18, 2004.



Traci A. Brown